UNIVERSITY OF NAMIBIA

FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
SCHOOL	VETERINARY MEDICINE		
DEPARTMENT	PARACLINICAL VETERINARY STUDIES		
PROGRAMME	BACHELOR OF VETERINARY MEDICINE		
MODULE	INFECTIOUS DISEASES I		
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DURATION	**3 HOURS**	**MARKS**	150

SECOND OPPORTUNITY EXAMINATION

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Internal Moderator: Dr. J Yabe
External Moderator: Prof. F Giovanni

This question paper consists of **six (6)** pages including this front page. Additional materials to be supplied: **None**
Instructions: *This question paper consists of Section A, B, C, D and E. Answer all questions in sections A to D and chose one question in section E.* ***Hand in this examination paper with your answer book***

SECTION A: MULTIPLE CHOICE QUESTIONS. **[10 MARKS, 1 mark each]**

Choose the correct answer.

1. The aetiologic agent of Fowl typhoid is:
   a. *Salmonella paratyphi*
   b. *Salmonella enteritidis*
   c. *Salmonella gallinarum*
   d. *S. typhimurium*

2. The common risk factor in the causation of dermatophilosis in sheep is:
   a. Tick infestation
   b. Shearing
   c. Rainfall
   d. All the above

3. In dermatophilosis of sheep, skin lesions lead to the characteristic appearance of.....
   a. Paint brush
   b. Nodular lesions
   c. Pallisade
   d. Vesicular lesions

4. The most encountered pathogenic salmonella in all species is:
   a. *S. paratyphi*
   b. *S. enteritidis*
   c. *S. typhi*
   d. *S. typhimurium*

5. Which of the following statements is false about the epidemiology of *Actinobacillus seminis* infections in sheep?
   a. Mainly a problem of young virgin rams on high plane of nutrition
   b. Venereal transmission by clinically and sub-clinically infected rams for long periods
   c. Ewes infected by the rams can become carriers and source of infection for other rams
   d. Vertical transmission does not occur.

6. Anthrax is septicemic in the following species:
   a. Cattle, sheep, and wild ungulates
   b. Pigs

c. Horses
d. Humans

7. The mode of transmission of brucellosis is the following except
   a. Contact trough skin and mucous membranes
   b. Ingestion of contaminated food and water
   c. Natural service with infected bulls
   d. All the above routes

8. By which ONE of the following methods does *Bacillus anthracis* survive between hosts?
   a. As a dried vegetative cell
   b. In soil as a spore
   c. In water
   d. In semen

9. Enzootic pneumonia in pigs is caused by
   a. *Mycoplasma hyopneumoniae*
   b. *Mycoplasma mycoides*
   c. *Actinobacillus pleuropneumoniae*
   d. *Haemophilus influenza*

10. Bacillary white diarrhea in chicks is caused by:
   a. *Salmonella gallinarum*
   b. *Salmonella arizonae*
   c. *Salmonella pullorum*
   d. *Salmonella enteritidis*

SECTION B: TRUE/FALSE AND FILL IN QUESTIONS **[20 MARKS]**

Question 1. [10]

Indicate whether the statement is TRUE or FALSE. Where it is false, give the correct statement.

a. Listeriosis is characterized on some livestock species by eight distinct syndromes of meningoencephalitis, abortion or still birth, diarrhoea, pyrexia, rough skin coat or alopecia, lacrimation, circling and neonatal septicaemia.
b. Listeria grows on ordinary media but prefers serum, blood, or glucose media.

c. Natural infections with *Actinobacillus lignieresii* occur in livestock and domesticated game and are characterized by infections containing granulous pus affecting the soft tissue in the body.

d. *Bacillus anthracis* is a Gram-positive, spore forming anaerobic rod-shaped bacterium.

e. The causative agents of Sleepy foal sickness in horses are *A equuli. A pleuropneumoniae, A suis and A lignieresii*

f. *Arcanobacterium pyogenes* is also associated with pharyngitis and mastitis in cattle.

Question 2. FILL /COMPLETE THE FOLLOWING SENTENCES **[10]**

a. ..... and ..... are diseases of sheep caused *Dermatophilus congolensis*.
b. Under the American CDC (Centers for Disease Control) there are two species of *Salmonella* namely ..... and .....
c. ..... is the leading cause of greasy pig disease.
d. In the infected body Staphylococcus aureus can be found in/on ....., *Mycobacterium can be found* in ....., while Clostridium perfringens is found in .....
e. ..... causes Lumpy Jaw/Osteomyelitis in cattle.
f. The neural form of listeriosis is also known as .....

SECTION C: SHORT ANSWER QUESTIONS. **[20 MARKS]**

Question 1: List the stress factors that may activate latent or subclinical salmonellosis? [4]
Question 2: List the clinical signs of *Prescottela* (*Rhodococcus*) *equi* infection in a 10-week-old foal? [4]
Question 3: Pathogenicity of *Nocardia* in domestic animals is attributed to which factors? [2]
Question 4. Give the main adverse effects of infectious bovine keratoconjunctivitis in cattle? [3]
Question 5. Explain the concept "bastard strangles". [2]
Question 6. Name the three exotoxins of *Bacillus anthracis*. [3]
Question 7. Differentiate between a true pathogen and an opportunistic pathogen. [2]

SECTION D: STRUCTURED QUESTIONS **[80 MARKS]**

Question 1. Answer the following questions about Yersinia **[10]**

a. List the three pathogenic species of *Yesinia* [3]
b. Name two reservoirs of *Y. pestis* in Africa [2]
c. Name the animal species which are very susceptible to plague [2]

d. List the two epidemic types of *Yersinia pestis* [2]

e. Which domestic animal is most likely to be affected by *Yersinia pestis*? [1]

Question 2. **[10]**

a. Describe any three virulence factors of *Actinobacillus pleuropneumonia*? [3]

b. List any three post-mortem lesions associated with porcine pleuropneumonia caused by *A. pleuropneumonia*? [3]

c. Describe four methods used to control porcine pleuropneumonia? [4]

Question 3. **[10]**

a. List the prevention approach you will institute in a dairy farm with outbreaks of foot rot in his herd. [7]

b. Broadly discuss the control and prevention of mycotoxicosis. [3]

Question 4. **[10]**

a. Describe and indicate for each bacteria the somatic antigens that allow to distinguish the different species and subspecies of *Campylobacter*. [5]

b. Describe the actions needed to prevent and control genital campylobacteriosis. [5]

Question 5. **[10]**

a. Discuss the treatment and prevention methods that can be used to control an outbreak of infectious bovine keratoconjunctivitis [5]

b. List any 5-differential diagnoses of Haemorrhagic septicemia. [5]

Question 6. **[10]**

a. Name the Dermatophyte species that commonly cause ringworm in: [3]

i. cattle
ii. dogs and cats
iii. poultry

b. Name the most common forms of avian aspergillosis [2]

c. Discuss the transmission of glanders in animals 5]

Question 7. **[10]**

a. Summarize the pathogenesis of animal brucellosis [7]

b. Name three (3) common vaccines used for the prevention of animal brucellosis. [3]

Question 8.

[10]

a. If there is several pathognomonic signs of the acute form of contagious bovine pleuropneumonia, the signs of chronic form of the disease are less obvious and might be missed. Describe the signs of the chronic form. [5]

b. Give the main differential diagnoses of anthrax in ruminants. [5]

SECTION E. ANSWER ONE OF THE TWO FOLLOWING QUESTIONS. [20 MARKS]

Question 1.

[20]

A. You have been asked to go and give a presentation on swine erysipelas at farmers information day. Describe this disease based on the following subheadings [18]

a. Etiology (1):

b. Susceptible hosts (5):

c. Clinical signs in acute cases (8):

d. Treatment (4):

B. Regarding anthrax explain the concept "casted field". [2]

Question 2.

[20]

A. Write short notes on the tests available for the diagnosis of bovine tuberculosis. [15]

B. Give five (5) infectious causes of post-weaning diarrhoea in pigs. [5]

END OF AXAM PAPER